

Ultem[®]2300/Polyetherimide (PEI) **30% Glass-filled**

KEY FEATURES

- Excellent Mechanical Strength
- High Dielectrical Strength
- Outstanding Heat Resistance
- Low Dissipation Factor over a Wide Range of Frequencies
- Exceptional Resistance to Environmental Forces
- Inherent Flame Resistance with Low Smoke Evolution
- Excellent Machinability and Finishing Characteristics

DESCRIPTION

Glass-filled ULTEM[®] is an amorphous thermoplastic polyetherimide (PEI) that has glass fibers added. This reinforcement provides greater tensile strength and rigidity than standard unfilled PEI while also improving dimensional stability.

TYPICAL PROPERTY VALUES

Physical	Properties	Condition	Units	Value	ASTM Test
	Density		g/cm ³	1.51	D792
	Chemical Designation			PEI	
	Filler			Glass Fibers	

Mechanical	Properties	Condition	Units	Value	ASTM Test
	Tensile Modulus	@ 73 °F	PSI	775,000	D638
	Tensile Strength	@ 73 °F	PSI	19,000	D638
	Shear Strength	@ 73 °F	PSI	14,000	D732
	Elongation @ Yld	@ 73 °F	%	3	D638
	Compressive Modulus	@ 73 °F	PSI	450,000	D695
	Elongation @ Brk	@ 73 °F	%	3	D638
	Flexural Modulus	@ 73 °F	PSI	850,000	D790
	Flexural Strength	@ 73 °F	PSI	28,000	D790
	Compressive Strength	@ 73 °F, 10% strain	PSI	25,500	D695
	Izod (Charpy) Impact Strength	@ 73 °F	ft-lbs/in	1.1	D256
	Rockwell Hardness	@ 73 °F	M (R) Scale	110	D785
	Coefficient of Friction	Static			
Limiting PV		psi-fpm			

Thermal	Properties	Condition	Units	Value	ASTM Test
	Heat Deflection Temperature	@ 66 PSI	°F	414	D648
	Heat Deflection Temperature	@ 264 PSI	°F	409	D648
	Service Temperature	Long Term	°F	356	
	Service Temperature	Intermittent	°F	392	
	Thermal Expansion (CLTE)		in/in/°F	1.1*10 ⁻⁵	D696
	Specific Heat		BTU/lb-°F		
Thermal Conductivity		BTU-in/hr-ft ² -°F	1.56	D2214	

Electrical	Properties	Condition	Units	Value	ASTM Test
	Surface Resistivity		ohms/square	>10 ¹³	ANSI/ESD STM 11.11
	Volume Resistivity		ohm-cm	33.0*10 ¹⁶	D257
	Dielectric Constant	50% RH		3.7	D150
	Dielectric Strength	@ 60 Hz, 73 °F	V/mil	770	D149
Dissipation Factor	@ 60 Hz, 73 °F		0.0015	D150	

Other	Properties	Condition	Units	Value	ASTM Test
	Moisture Absorption	@ 24 hrs, 73 °F	%	0.16	D570
	Moisture Absorption	@ Saturation, 73 °F	%	0.9	D570
	Flammability	UL 94		V-0	
	Food Grade			Y	
Relative Cost			\$\$\$		

• The data stated above are typical values intended for reference and comparison purposes only.
• The data should not be used as a basis for design specifications or quality control.

• The information is provided as a guide to the best of our knowledge and given without obligation or liability.
• Testing under individual application circumstances is recommended